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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/644,709	08/20/2003	Toru Takahashi	N002-5092	6695

7590 09/20/2005

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EXAMINER
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TRIEU, THERESA

ART UNIT	PAPER NUMBER
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3748

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/644,709	<b>Applicant(s)</b> TAKAHASHI ET AL.	
	<b>Examiner</b> Theresa Trieu	<b>Art Unit</b> 3748	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2005.  
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 1-4 and 6-8 is/are rejected.  
 7) ☒ Claim(s) 5 is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☒ All b) ☐ Some \* c) ☐ None of:  
 1. ☒ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>April 7, 2005</u>   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

This Office Action is responsive to the applicants' amendment filed on June 24, 2005.

Claims 1-8 have been amended. Thus, claims 1-8 are pending in this application.

Applicants' cooperation in correcting the informalities in the specification are appreciated.

The previous indication of allowability of claims 1-8 is hereby withdrawn. An updated search and further review of the prior art of record has prompted the new rejection.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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*Claims 1-4 and 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takao et al. (Takao) (Patent Number 4,653,991) in view of Matsuda et al. (Matsuda) (Publication Number JP 60-145476).*

Regarding claims 1, 4 and 6, as shown in Figs. 1-5, Takao discloses a gas compressor comprising:

a compressor main body which sucks, compresses, and discharges refrigerant gas, and an oil sump (22) which stores oil for lubricating the compressor main body, the compressor main body being composed of a cylinder, side blocks (1, 2) disposed at axial ends of the cylinder, a rotor rotatably mounted to undergo rotation in the cylinder, vane grooves (27) formed so as to extend from an outer peripheral surface of the rotor (5) to an inner periphery thereof, and vanes accommodated in the vane grooves so as to be capable of advancing and retracting;

a back pressure space including bottom portions of the vane grooves (27) and attaining a middle pressure between a suction pressure and a discharge pressure during normal operation of the compressor main body;

a first high pressure oil passage (31) establishing communication between the oil sump and the vane groove bottom portions when the vanes are at their discharge stroke positions;

a second high pressure oil passage (33) establishing communication between the oil sump and the back pressure space;

the back pressure space having a flat groove communicating with the vane groove (27) bottom portions when the vanes are at their positions in transition from suction stroke to compression stroke, and the vane groove bottom portions (27) communicate with the first high

pressure oil passage (31) after the communication between the flat groove and the vane groove bottom portions (27) is interrupted; and the downstream end portion of the second high pressure oil passage (33) opening into the flat groove. However, Takao fails to disclose an opening/closing valve.

Matsuda teaches that it is conventional in the art to utilize an opening/closing valve (21) for opening and closing the second high pressure oil passage (16). It would have been obvious to one having ordinary skill in the art at the time the invention was made, to have utilized the opening/closing valve, as taught by Matsuda in the Takao apparatus, since the use thereof would have controlled the flow rate of the second high pressure oil passage and improved the performance and the efficiency of the compressor device. Note that in claims 1 and 7, the limitation “for opening and closing the second high pressure oil passage” and “for imparting an elastic force to the valve element to place the valve element at a position where the valve element opens/closes the passage” are intended use. A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. See *In re Casey*, 370 F.2d 576, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 312 F.2d 937, 939, 136 USPQ 458, 459 (CCPA 1963).

Regarding claims 2, 3, 7 and 8, Matsuda further discloses the opening/closing valve (21) keeps the second high pressure oil passage (16) open when the rotation of the compressor main body is at rest/not performing normal operation and the oil pressure is low, closes the second

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high pressure oil passage when the compressor main body starts rotation, and keeps the second high pressure oil passage closed during normal operation of the compressor main body (see abstract and Figs. 1-10); opening/closing valve is movably arranged so as to open and close the second high pressure oil passage (16) and has a valve element situated at a position where the valve element closes the flow passage and an elastic member (27 – see Fig. 5); a differential pressure of the high pressure oil to which the discharge pressure in the compressor being imparted and a middle pressure oil being applied to the valve element.

***Allowable Subject Matter***

Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa Trieu whose telephone number is 571-272-4868. The examiner can normally be reached on Monday-Friday 8:30am- 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on 571-272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TT  
September 17, 2005



Theresa Trieu  
Primary Examiner  
Art Unit 3748